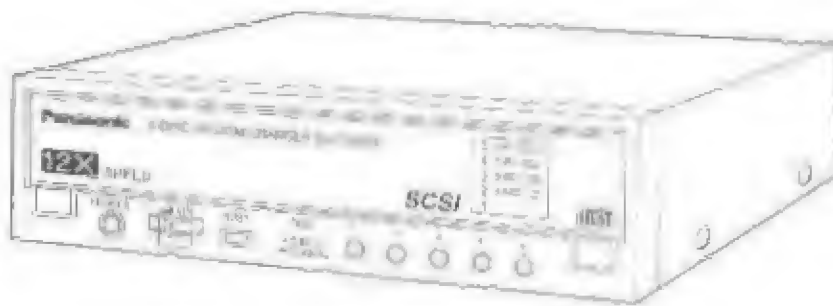


# Panasonic®

## 5-Disc CD-ROM Changer

### SQ-TC512F

## Operating Instructions



Before connecting, operating or adjusting this product, please read these instructions completely. Please save this manual.

Interface: SCSI-2 Command Compatible



# ***IMPORTANT SAFETY NOTICE***

To prevent fire or electric shock, do not expose this appliance to rain or moisture.

## **FEDERAL COMMUNICATIONS COMMISSION (FCC) RADIO FREQUENCY INTERFERENCE STATEMENT**

Class B Computing Device

### **CAUTION:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any unauthorized changes or modifications to this equipment would void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**FCC WARNING:** Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

### **NOTICE**

- (1) Reproduction of any part of this publication without authorization is prohibited.
- (2) The manufacturer reserves the right to revise this document without notice at any time.
- (3) If any questions arise concerning this document, please contact your sales representative or Panasonic Technical Support at 1-800-Panasys (1-800-726-2797).

## ***LASER SAFETY INFORMATION***

Class 1 LASER Product

This equipment is certified to comply with DHHS Rule 21 CFR Chapter 1, Subchapter J in effect as of date of manufacture.

This equipment is classified as a Class 1 level LASER product and there is no hazardous LASER radiation.

### **Caution:**

- (1) The use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- (2) The CD-ROM Changer is designed to be incorporated into a computer-based system or unit which has an enclosed cover. The CD-ROM Changer may not be used as a stand-alone unit.

**LASER Specification:**

Type: Semiconductor laser GaAlAs


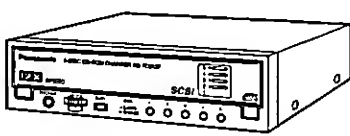
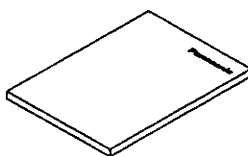
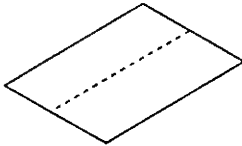

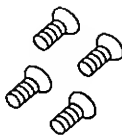

Wave length: 780 nm

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## IDENTIFYING THE KIT CONTENTS

The following is a checklist of items which are included with your Panasonic CD-ROM Changer. Be sure to save the original box and packing materials for future shipments or transportation of your Panasonic CD-ROM Changer.

|  |  |  |  |
|--|--|--|--|
| <div><input checked="" type="checkbox"/></div> <div></div> <div>Please check and identify the supplied accessories.</div> | <div><input type="checkbox"/></div> <div></div> <div>5-Disc CD-ROM Changer</div>   | <div><input type="checkbox"/></div> <div></div> <div>Operating Instructions Manual (This book)</div> |  |
| <div><input type="checkbox"/></div> <div></div> <div>Warranty &amp; Registration Card</div>                               | <div><input type="checkbox"/></div> <div></div> <div>Jumper pin . . . . . 3</div> | <div><input type="checkbox"/></div> <div></div> <div>Mounting Screws . . . . 4 (XST3+4)</div>         | <div><input type="checkbox"/></div> <div></div> <div>Eject Pin. . . . . 1 (RFE0030)</div> |

# INTRODUCTION

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Congratulations on your purchase the 5-DISC CD-ROM Changer. The Panasonic SQ-TC512F CD-ROM Changer features Panasonic's 12× speed technology, which allows data to be accessed at high speed.

CD-ROM is read-only memory using an audio compact disc system as a media package which handles digital data.

This CD-ROM Changer uses CD-ROM data discs which bear the following mark.



This CD-ROM Changer uses digital audio compact discs which bear the following mark.



However, do not use irregular shape CDs (heart-shape, octagonal, etc.). CDs of the sort can damage the unit.

## Supports Major CD-ROM Formats

CD-DA(Audio), CD-ROM, CD-ROM XA, Photo CD Multisession\*

Video for Windows\*\*, QuickTime for Windows\*\*, CD-I\*\*\*, Video-CD\*\*\*

\* Requires a Photo CD viewer (not included)

\*\* Requires Microsoft Video for Windows, Apple QuickTime for Windows (not included)

\*\*\*Requires MPEG decoder board or MPEG decoder software and CD-I and/or Video-CD playback software (not included)

## System Requirements

80386, 80486 or Pentium based ISA Computer

8 MB of RAM

3 MB of free space on Hard Disk

Most EIDE hard disk (HDD) controllers

Windows 95 & Windows NT 4.0 Ready

Supports DOS 5.0 & Higher, Windows 3.1 & 3.11

## Feature Summary

- 1 Half-height mounting 5-disc CD-ROM Changer
- 2 Tray system permits easy exchange of any single disc.
- 3 High Quality and Durability adopted by Stepping Traverse Motor
- 4 12×-speed data transfer rate [1800 KB/s (average)]
- 5 SCSI-2 Interface
- 6 Easy visible "DISC WINDOW" to check which disc is loaded

## Licenses and Trademarks

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- Microsoft Windows, MS-DOS and Video for Windows are trademarks of Microsoft Corporation.
- QuickTime for Windows is a trademark of Apple Computer, Inc.
- © Copyright LHA Version 2.13 H. Yoshizaki, 1988-1991
- © Copyright Matsushita Electric Industrial Co., Ltd. 1997

# OPERATION GUIDE

Before you begin installing your Panasonic CD-ROM Changer, please take a few minutes to read the following Operation Guidelines.

## I) WHEN TRANSPORTING

To avoid damage

- Keep the original packing materials.
- Before transporting the CD-ROM Changer, remove the discs from the Changer and repack it in its original packing.

## II) WHEN INSTALLING

Do not install the CD-ROM Changer in environments where it would be subjected to

- High-temperature, high-humidity, or extreme temperature changes
- Dust
- Excessive vibration/sudden shock
- Inclines or angled operation
- Direct sunlight

**Do not install the CD-ROM Changer in a vertical position.**

## III) WHEN USING

- Never push objects of any kind through the cabinet slots.
- Never spill liquid of any kind on the CD-ROM Changer.
- Do not place objects on the unit.
- This CD-ROM Changer is not user serviceable; do not open or remove cover.
- **Do not insert foreign objects in the disc insertion slot and attempt to operate.**

## IV) WHEN OPERATING

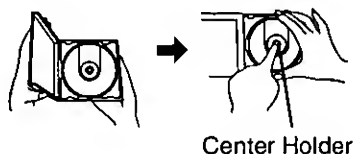
To avoid data errors

- Do not move the CD-ROM Changer while operating.
- Do not operate the CD-ROM Changer immediately after a sudden change in temperature.

## V) WHEN HANDLING DISCS

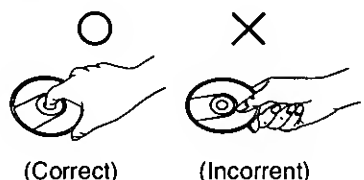
**To remove a disc from its case**

Press the center holder and lift the disc by grasping the edges.



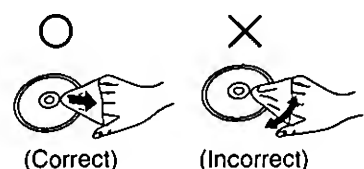
**To hold the disc**

Hold the disc by the edges so the surface is not soiled with fingerprints. Fingerprints, dirt and scratches can cause skipping and distortion.



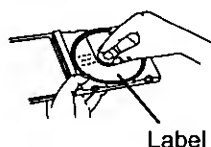
**If the surface is soiled**

Wipe gently with a soft, damp (water only) cloth.



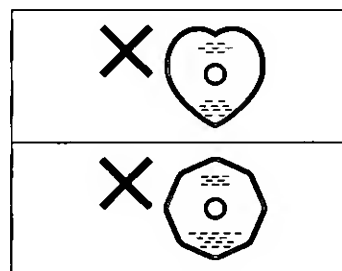
**To store a disc in its case**

Insert the disc with label facing upwards and press downwards at the center.



## Handling precautions:

- If you are taking the disc from a cold to a warm environment, moisture may form on the disc. Wipe this off with a soft, dry, lint-free cloth before using the disc.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Do not use CDs with poorly attached labels or stickers. Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your stereo to malfunction.
- Do not use irregular shape CDs (heart-shape, octagonal, etc.).



## Storage precautions:

Be sure to store discs in their cases to protect them from dust, scratches and warping.

Do not place or store discs in the following places:

- Locations exposed to direct sunlight
- Humid or dusty locations
- Locations directly exposed to a heat vent or heating appliance
- In the glove compartment or on the rear deck of an automobile

# PARTS AND FUNCTIONS

## FRONT VIEW

### DISC TRAY

(inside)

Accepts up to 5 discs of CD-ROM or digital audio discs.

### VOLUME

Adjusts the headphone audio output level.

### DISC WINDOW

Easy visible "DISC WINDOWS" for viewing the installed discs. Visual confirmation of which disc is loaded. The slot with the white mark missing is the disc which is currently loaded in the CD-ROM Changer.

### HEADPHONE JACK

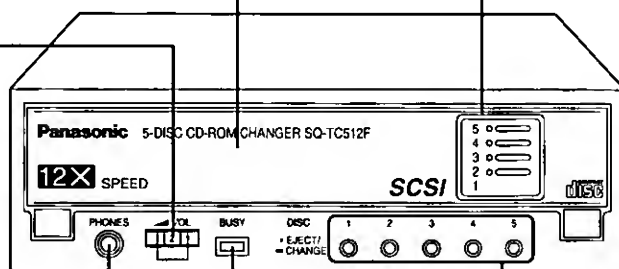
Accepts a standard 3.5mm stereo mini plug to connect your headphones to the CD-ROM Changer.

### BUSY INDICATOR

Lights when data is being accessed from the disc or when the CD-ROM Changer is playing an audio CD.

### EJECT/CHANGE BUTTONS (DISC 1-DISC 5)

Press quickly to eject a disc tray/press and hold for a moment to load the disc.



## REAR VIEW

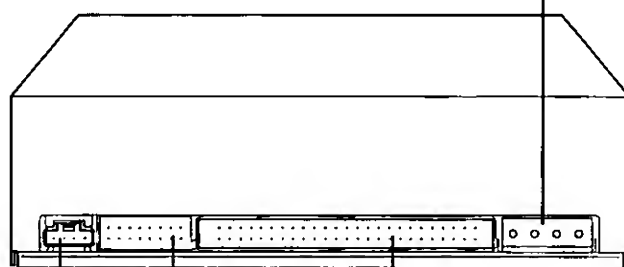
### DC POWER CONNECTOR

### AUDIO CONNECTOR

### JUMPER PIN

These are used to set the ID. Please refer to page 7 for more information.

### INTERFACE CONNECTOR





# BEFORE USING/SHIPPING THE CD-ROM CHANGER

## Removing the Shipping Spacer

Before using the CD-ROM Changer, you must remove the shipping spacer from the disc tray. Install the Driver and Utility only after you have removed the spacer. Failure to do this may damage your disc on the changer.

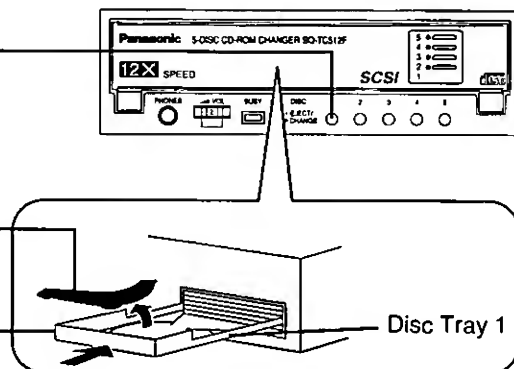
**1 Turn the computer ON.**  
The CD-ROM Changer will turn ON.

**2 Press DISC EJECT button 1.**  
The disc tray 1 will eject.

**3 Remove the shipping spacer.**

**4 Push the tray until it retracts automatically.**

**5 Turn OFF the computer.**



### NOTE:

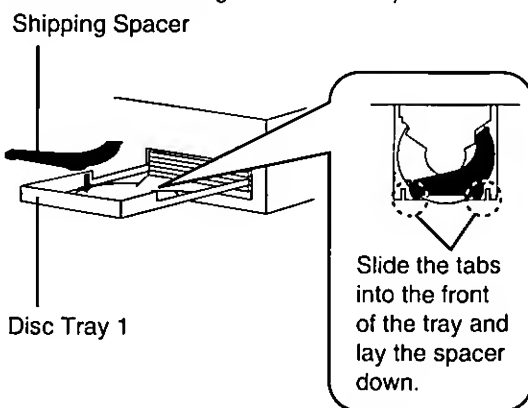
Save the shipping spacer and box. You will need them when moving or shipping the equipment.

## Caution for Shipping

Be sure to take the following precautions before moving your Changer a considerable distance, shipping the changer, or taking it in for service.

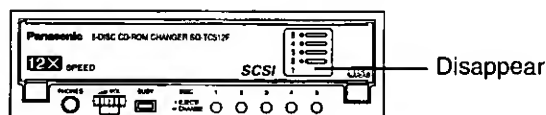
**1 Insert the shipping spacer into disc tray 1.**  
(This is also necessary if moving your computer with the CD-ROM Changer still installed.)

- 1 Turn your computer ON.**  
The CD-ROM Changer will turn ON.
- 2 Remove all discs.**
- 3 Press DISC EJECT button 1.**  
Disc tray 1 will eject.
- 4 Insert the shipping spacer into disc tray 1.**
- 5 Push the tray until it retracts automatically.**
- 6 Turn OFF the computer.**



**2 Check for the white mark next to tray "1" on the disc window. If the white mark is still visible, press and hold tray button number 1 until the white mark disappears.**

**3 Your Changer is ready for shipping.**  
Pack the Changer in the original box.

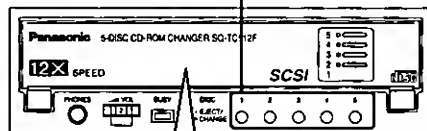




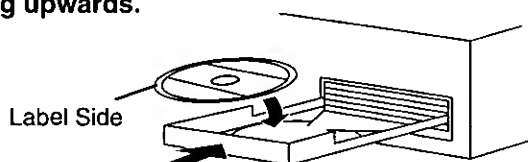
# INSERTING/REMOVING DISCS

- 1 Turn the computer ON.**  
The CD-ROM Changer will turn ON.

- 2 Press one of the tray eject buttons.**  
The disc tray will eject.



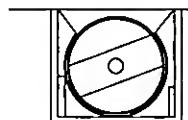
- 3 Set the disc in the tray.**  
The label must be facing upwards.



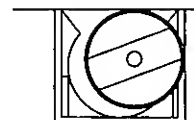
- 4 Push the tray until it retracts automatically.**

**NOTE:**

Be sure to see the disc correctly in the tray.



Correct



Incorrect

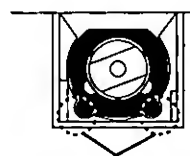
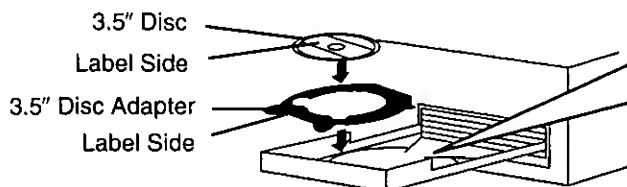
- 5 Repeat steps 2 and 3 until you have loaded all your favorite discs.**

**NOTE:**

- Do not insert any objects other than an audio CD or a CD-ROM disc into the disc tray. This could result in a malfunction and jam the changer.
- Do not manually force the tray open or press down hard on the tray when loading a disc, since this may result in damage or malfunction of the tray.
- When the CD-ROM Changer is not in use, keep the tray closed to protect it from dust and dirt.
- You cannot open/close the disc tray while using the headphones jack.

**For 3.5" discs**

Use the disc adapter (option: RMQ0611) designed specifically for this unit. As shown below, insert the adapter in the tray, then the disc in the adapter.



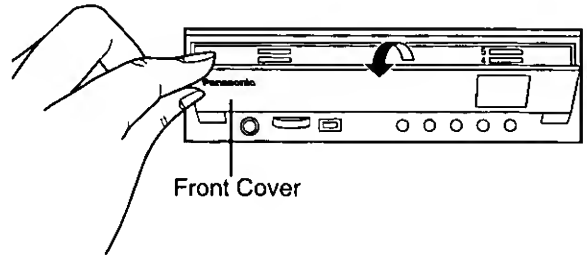
Keep the latches on the adapter to the bottom when fitting it into the tray.

**CAUTION:**

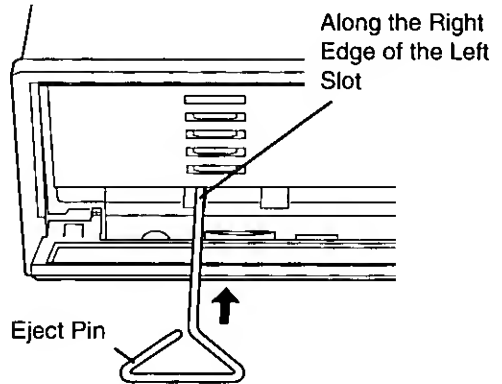
Do not use other types of CD adapters. Incompatible products could cause the equipment to malfunction.

## If the tray does not eject automatically

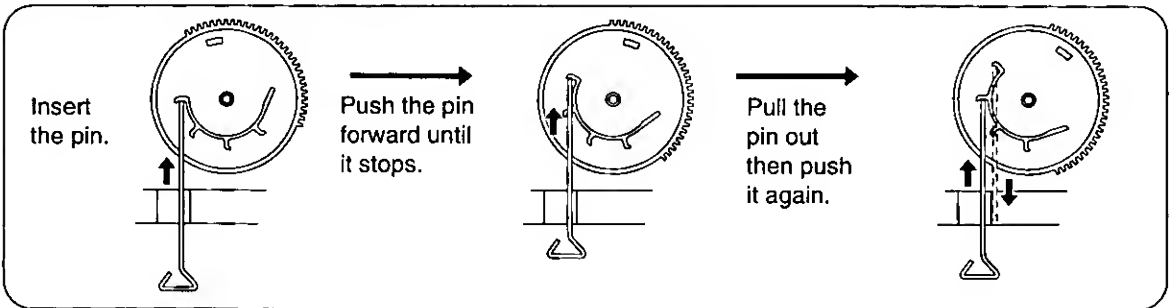
- 1** Turn OFF your computer.
- 2** Open the front cover of the CD-ROM Changer carefully.



- 3** Insert the eject pin.
  - 1** Gently push the pin along the right edge of the left slot until the pin stops.  
The tray will eject a little.
  - 2** Pull the pin out and then push it again about four times until the tray is extended enough that you can pull it out by hand.



Mechanism inside works as follows:

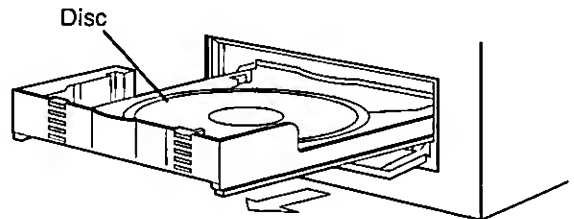


- 4** Pull the tray the rest of the way by hand.

(The tray currently in the play position and the tray immediately below it can both be pulled out by hand.)

- 5** Remove the disc from the tray and turn ON your computer.

(This is to check, if the Changer returns to normal position.)



If the CD-ROM Changer becomes jammed, please contact our hotline for assistance.  
(1-800-726-2797)

# SPECIFICATION SUMMARY

|                                 |                         |   |
|---------------------------------|-------------------------|---|
| <b>Interface</b>                |                         | SCSI-2 Interface  |
| <b>Playable Disc Format</b>     |                         | CD-ROM (mode 1 and mode 2)<br>CD-ROM XA (mode 2 form 1 and form 2)<br>PHOTO CD (Single and multisession)* <sup>1</sup><br>CD-DA, CD Extra (CD Plus)<br>Video CD* <sup>1</sup> , Video for Windows* <sup>1</sup> |
| <b>Data Transfer Rate</b>       |                         | 1200–1900 KB/s<br>1800 KB/s (average)* <sup>2</sup>   |
|                                 | <b>From Buffer</b>      | 10 MB/s (Synchronous)<br>5 MB/s (Asynchronous)  |
| <b>Access Time</b>              | <b>1/3 Stroke</b>       | 130 ms typ.   |
| <b>Buffer Memory Capacity</b>   |                         | 512 KB  |
| <b>Error Rates</b>              | <b>Hard Read Errors</b> | Less than 10 <sup>-12</sup>   |
|                                 | <b>Soft Read Errors</b> | Less than 10 <sup>-9</sup>  |
| <b>Output Level (Impedance)</b> | <b>Headphone</b>        | 0.6 Vrms (32Ω)  |
|                                 | <b>Line Out</b>         | 0.8 Vrms (50 kΩ)  |
| <b>Frequency Response</b>       | <b>Line Out</b>         | 20 Hz–20 kHz (+0.5, –3 dB)  |
| <b>S/N</b>                      | <b>Line Out</b>         | More than 85 dB   |
| <b>Temperature</b>              | <b>Operating</b>        | 5 to 45°C   |
|                                 | <b>Storage</b>          | –20 to 60°C   |
| <b>Humidity</b>                 | <b>Operating</b>        | 20 to 90% Rh (Non-condensing)   |
|                                 | <b>Storage</b>          | 20 to 90% Rh (Non-condensing)   |
| <b>Source Voltage</b>           |                         | DC 5 V±5%<br>DC 12 V±10%  |
| <b>Source Current</b>           |                         | 1.2 A (DC 5 V)<br>1.5 A (DC 12 V)   |
| <b>Dimensions (W×H×D)</b>       |                         | 146×41.3×234 mm<br>(5¾"×1⅝"×9⅞")  |
| <b>Weight</b>                   |                         | 1.3 kg (2.9 lb.)  |

\*<sup>1</sup>Requires Viewer or Playback Software

\*<sup>2</sup>Average of 650 Mbytes Transfer time

## Note:

Weight and dimensions shown are approximate.

Specifications are subject to change without notice.

# ***TROUBLESHOOTING***

---

| <b>Problem</b>                    | <b>Check these possibilities:</b>   |
|-----------------------------------|---|
| Tray doesn't eject.               | Is the power cord plugged in correctly?<br>Is the CD or CD-ROM inserted properly?<br>Disconnect the headphones.   |
| CD or CD-ROM won't play.          | Are you trying to use a CD or CD-ROM that is not compatible with this machine?<br>Are you using the appropriate CD or CD-ROM software?<br>Is the CD or CD-ROM inserted into the tray properly?<br>Is the CD or CD-ROM inserted with the label side up?<br>Is the CD or CD-ROM scratched, broken, warped or dirty?<br>Is there condensation on the machine? (Is so, leave the machine on for an hour and try again.) |
| No sound comes out of headphones. | Is the volume adjusted properly?<br>Are the headphones properly connected?  |

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**Panasonic Computer Peripheral Company**  
**Division of Matsushita Electric Corporation of America**

Two Panasonic Way, Secaucus, New Jersey 07094

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